CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004

DateRun: 04/29/2004

Experimenters: Jason Marshall

ClientType: Capacitor Manufacturer

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To evaluate five new products on soil number 2

Experimental Procedure: Five products were selected based on client request for vapor degreasing solvents. Each product was used at full strength in a 250 ml beaker and heated to 96 F on a hot plate. Fifteen preweighed aluminum coupons were coated with the Cargill, Inc Canola Oil (120962-03-0) using a hand held swab. Coupons were weighed a second time to determine the amount of soil added to each coupon. Three coupons were cleaned in each solution for 5 minutes using stir-bar agitation. After cleaning parts were allowed to sit for 10 minutes for drying at room temperature. The coupons were weighed a final time and efficiencies were calculated.

Results: All five products removed over 87% of the second soil. The table lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Ensolv	0.1373	0.0011	99.20
	0.2822	0.0006	99.79
	0.2878	0.0004	99.86
Ensolv A	0.1843	0.0004	99.78
	0.2530	-0.0001	100.04
	0.1826	0.0011	99.40
Metalnox M6960	0.2569	0.0000	100.00
	0.2871	-0.0002	100.07
	0.3243	0.0001	99.97
Flux Remover	0.1722	0.0061	96.46
	0.2958	-0.0006	100.20
	0.2358	0.0033	98.60
Heavy DutyDegreaser C	0.2751	0.0336	87.79
	0.2899	0.0459	84.17
	0.3385	0.0337	90.04

Summary:

Substrates:	Aluminum
Contaminants:	Oil

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Enviro Tech International Inc	Ensolv	100	99.62	☑	
Enviro Tech International Inc	Ensolv A	100	99.74	☑	
Kyzen Corporation	Metalnox M6960	100	100.01	☑	
Micro Care	Flux Remover C	100	98.42	☑	
Micro Care	Heavy Duty Degreaser C	100	87.33	☑	

Conclusion: All five products will be tested on soil number 3.